

U.S. Serial No.: 10/652,314
Amendment Under 37 C.F.R. §1.111 dated September 24, 2004
Response to the Office Action of June 24, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): A resist application method comprising the steps of:

thermal processing for evaporating water from the surface of a substrate;

making the surface of the substrate hydrophobic with a hydrophobic processing material;

and

applying a resist onto the substrate,

the step of thermal processing to the step of making the substrate surface hydrophobic being performed in a dehumidified atmosphere, and

the step of applying the resist being performed in an atmosphere having a higher humidity than the dehumidified atmosphere.

Claim 2 (Original): A resist application method according to claim 1, wherein the hydrophobic processing material is hexamethyldisilazane.

Claim 3 (Original): A resist application method according to claim 1, wherein a humidity of the dehumidified atmosphere is below 20% including 20%.

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Claim 4 (Original): A resist application method according to claim 2, wherein
a humidity of the dehumidified atmosphere is below 20% including 20%.

Claim 5 (Original): A resist application method according to claim 1, wherein
the dehumidified atmosphere is dehumidified air, nitrogen gas, a rare gas or a mixed gas
of them.

Claim 6 (Original): A resist application method according to claim 2, wherein
the dehumidified atmosphere is dehumidified air, nitrogen gas, a rare gas or a mixed gas
of them.

Claim 7 (Original): A resist application method according to claim 3, wherein
the dehumidified atmosphere is dehumidified air, nitrogen gas, a rare gas or a mixed gas
of them.

Claim 8 (Original): A resist application method according to claim 1, wherein
in the step of thermal processing, a temperature of the substrate is above 100°C including
100°C.

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Claim 9 (Original): A resist application method according to claim 2, wherein
in the step of thermal processing, a temperature of the substrate is above 100°C including
100°C.

Claim 10 (Original): A resist application method according to claim 3, wherein
in the step of thermal processing, a temperature of the substrate is above 100°C including
100°C.

Claim 11 (Original): A resist application method according to claim 5, wherein
in the step of thermal processing, a temperature of the substrate is above 100°C including
100°C.

Claim 12 (Original): A resist application method according to claim 1, wherein
in the step of making the surface of a substrate hydrophobic, the substrate surface is made
hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

Claim 13 (Original): A resist application method according to claim 2, wherein
in the step of making the surface of a substrate hydrophobic, the substrate surface is made
hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

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Claim 14 (Original): A resist application method according to claim 3, wherein
in the step of making the surface of a substrate hydrophobic, the substrate surface is made
hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

Claim 15 (Original): A resist application method according to claim 5, wherein
in the step of making the surface of a substrate hydrophobic, the substrate surface is made
hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

Claim 16 (Original): A resist application method comprising the steps of:
thermal processing for evaporating water from the surface of a substrate;
making the surface of the substrate hydrophobic with a hydrophobic processing material;
and
applying a resist onto the substrate,
in the step of thermal processing, a temperature of the substrate being above 150°C
including 150°C.

Claim 17 (Original): A resist application method according to claim 16, wherein
in the step of thermal processing, a temperature of the substrate is above 200°C including
200°C.

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Claim 18 (Withdrawn): A resist application device comprising:

a thermal processing unit for performing thermal processing to evaporate water from the surface of a substrate in a dehumidified atmosphere;

a hydrophobic processing unit for making the substrate surface hydrophobic with a hydrophobic processing material, keeping the dehumidified atmosphere; and

a resist application unit for applying a resist onto the substrate.

Claim 19 (Withdrawn): A resist application device according to claim 18, wherein the hydrophobic processing unit further comprises a heating means.

Claim 20 (Currently Amended): A method for fabricating a semiconductor device comprising the steps of:

thermal processing for evaporating water from the surface of a semiconductor substrate;

making the surface of the substrate hydrophobic with a hydrophobic processing material;

and

applying a resist onto ~~[[a]]~~ the semiconductor substrate, ~~by the resist application method according to claim 1~~

the step of thermal processing to the step of making the substrate surface hydrophobic being performed in a dehumidified atmosphere, and

the step of applying the resist being performed in an atmosphere having a higher humidity than the dehumidified atmosphere.